Screening for Appropriate Assessment for proposed upgrade works to Killinarden Park and Green Infrastructure Corridor in Whitestown, Tallaght

Technical Report

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South Dublin County Council

County Hall
Tallaght
DUBLIN 24

JBA Project Manager

Jonathan Cooper
24 Grove Island
Corbally
LIMERICK

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Contract

This report describes work commissioned by South Dublin County Council, by a letter dated 27/05/2020. Malin Lundberg, Hannah Mulcahy and Patricia Byrne of JBA Consulting carried out this work.

Prepared by ..... Malin Lundberg BSc MSc
Ecologist

Hannah Mulcahy BSc MSc
Ecologist

Reviewed by ..... Steven Heathcote BA DPhil MCIEEM
Senior Ecologist

Purpose

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Contents

List of Figures

List of Tables

Abbreviations

AA	Appropriate Assessment
CIEEM	Chartered Institute of Ecology and Environmental Management
DoEHLG	Department of the Environment, Heritage and Local Government
EC	European Community
EPA	Environmental Protection Agency
GSI	Geological Survey of Ireland
IROPI	Imperative Reasons of Over-riding Public Interest
NBDC	National Biodiversity Data Centre
NPWS	National Parks and Wildlife Services
OPW	Office of Public Works
RBMP	River Basin Management Plan
QI	Qualifying Interest
SAC	Special Area of Conservation, protected under the EU Habitats Directive
SPA	Special Protection Area for birds, protected under the EU Habitats Directive
WFD	Water Framework Directive
ZoI	Zone of Influence

1 Introduction

1.1 Background

JBA Consulting Ireland Ltd. has been commissioned by South Dublin County Council to undertake a Screening for Appropriate Assessment for a proposed project to upgrade Killinarden Park and construction of a Strategic combined pathway and cycleway along a section of Whitestown Stream in Tallaght, Dublin 24.

A separate Ecological Impact Assessment (EcIA) and an Environmental Impact Assessment (EIA) Screening report have been carried out for this proposed project.

1.2 Legislative Context

Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Fauna and Flora, known as the 'Habitats Directive' - provides legal protection for habitats and species of European importance. Article 2 of the Directive requires the maintenance or restoration of habitats and species of European Community interest, at a favourable conservation status. Articles 3 - 9 provide the legislative means to protect habitats and species of Community interest through the establishment and conservation of an EU-wide network of sites known as Natura 2000 sites. Natura 2000 sites are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Conservation of Wild Birds Directive (79 / 409 / EEC).

Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans or projects affecting Natura 2000 sites. Article 6(3) establishes the requirement for Appropriate Assessment:

"*Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public*."

Article 6(4) deals with the steps that should be taken when it is determined, as a result of Appropriate Assessment, that a plan/project will adversely affect a European site. Issues dealing with alternative solutions, imperative reasons of overriding public interest and compensatory measures need to be addressed in this case.

Article 6(4) states:

"*If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member States shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.*

Where the site concerned hosts a priority natural habitat type and / or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest."

The requirements of Articles 6(3) and 6(4) of the Habitats Directive have been transposed into Irish legislation by means of the Habitats Regulations, 1997 (S.I. No. 94 of 1997) and the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 / 2011).

1.3 Appropriate Assessment Process

Guidance on the Appropriate Assessment (AA) process was produced by the European Commission in 2002, which was subsequently developed into guidance specifically for Ireland by the Department of Environment, Heritage and Local Government (DEHLG) (2009). These guidance documents identify a staged approach to conducting an AA, as shown in Figure 1-1.

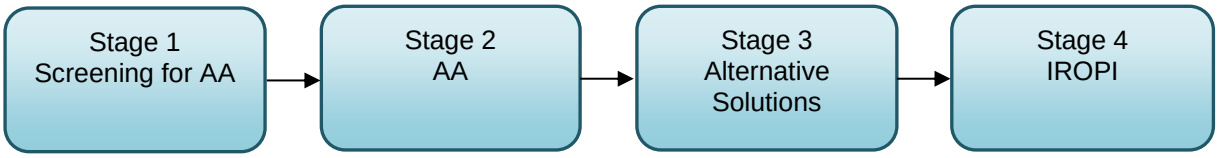

Figure 1-1: The Appropriate Assessment Process (from: Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities, DEHLG, 2009).

1.3.1 Stage 1 - Screening for AA

The initial, screening stage of the Appropriate Assessment is to determine:

whether the proposed plan or project is directly connected with or necessary for the management of the European designated site for nature conservation

if it is likely to have a significant adverse effect on the European designated site, either individually or in combination with other plans or projects

For those sites where, potential adverse impacts are identified, either alone or in combination with other plans or projects, further assessment is necessary to determine if the proposals will have an adverse impact on the integrity of a European designated site, in view of the site's conservation objectives (i.e. the process proceeds to Stage 2).

1.3.2 Stage 2 - AA

This stage requires a more in-depth evaluation of the plan or project, and the potential direct and indirect impacts of them on the integrity and interest features of the European designated site(s), alone and in-combination with other plans and projects, taking into account the site's structure, function and conservation objectives. Where required, mitigation or avoidance measures will be suggested.

The competent authority can only agree to the plan or project after having ascertained that it will not adversely affect the integrity of the site(s) concerned. If this cannot be determined, and where mitigation cannot be achieved, then alternative solutions will need to be considered (i.e. the process proceeds to Stage 3).

1.3.3 Stage 3 - Alternative Solutions

Where adverse impacts on the integrity of Natura 2000 sites are identified, and mitigation cannot be satisfactorily implemented, alternative ways of achieving the objectives of the plan or project that avoid adverse impacts need to be considered. If none can be found, the process proceeds to Stage 4.

1.3.4 Stage 4 - IROPI

Where adverse impacts of a plan or project on the integrity of Natura 2000 sites are identified and no alternative solutions exist, the plan will only be allowed to progress if imperative reasons of overriding public interest can be demonstrated. In this case compensatory measures will be required.

The process only proceeds through each of the four stages for certain plans or projects. For example, for a plan or project, not connected with management of a site, but where no likely significant impacts are identified, the process stops at stage 1. Throughout the process, the precautionary principle must be applied, so that any uncertainties do not result in adverse impacts on a site.

This report is in support of a Stage 1 Screening for Appropriate Assessment.

1.4 Guidance on Appropriate Assessment

The Screening for Appropriate Assessment has been carried out with reference to the following documents:

- DoEHLG (2009 rev 2010) Appropriate Assessment of Plans and Projects in Ireland Guidance for Planning Authorities. Department of the Environment, Heritage and Local Government (DoEHLG 2009a).
- European Commission (2018). Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC (EC 2018)

- EC (2002) Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg. European Commission (European Commission et al. 2002).
- EC (2007) Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the commission. European Commission (European Commission 2007).
- CIEEM (2016). Guidelines for Ecological Impact Assessment in the UK and Ireland - Terrestrial, Freshwater and Coastal, Second Ed. (CIEEM 2016)
- Fossitt, J., (2000). A Guide to Habitats in Ireland. The Heritage Council, Kilkenny (Fossitt 2000).

1.5 Methodology

1.5.1 Desktop study

A desktop study was conducted of available published and unpublished information, along with a review of data available on the NPWS and National Biodiversity Data Centre (NBDC) web-based databases, in order to identify key habitats and species (including legally protected and species of conservation concern) that may be present within ecologically relevant distances from the scheme as explained below. The data sources below were consulted for the desktop study:

- NPWS website (www.npws.ie), (https://www.npws.ie/), where site synopses, Natura 2000 data forms and conservation objectives were obtained along with Annex 1 habitat distribution data and status reports. (DoEHLG 2009b)
- National Biodiversity Data Centre (NBDC) Maps (http://maps.biodiversityireland.ie/#/Map)
- Environmental Protection Agency (EPA) maps website (https://gis.epa.ie/EPAMaps/)
- River Basin Management Plans (RBMP) (www.wfdireland.ie);
- NBDC Biodiversity Maps (http://maps.biodiversityireland.ie/#/Map);
- Catchments (www.catchments.ie)
- Planning Applications (myplan.ie)
- Geological data (gsi.ie/data-and-maps)

1.5.2 Ecological Field Surveys

To inform this AA Screening ecological surveys were carried out by JBA Ecologists, Malin Lundberg, Patricia Byrne on 29 June 2020. The ecological walkover survey was carried out in general accordance with the methods outlined in the following documents:

- Heritage Council (2011). Best Practice Guidance for Habitat Survey and Mapping (Smith et al. 2011).
- Fossitt, J. (2000). A Guide to Habitats in Ireland. The Heritage Council, Kilkenny (Fossitt 2000).

1.6 Limitations and Constraints

The screening assessment necessarily relies on some assumptions and it was inevitably subject to some limitations. These would not affect the conclusion, but the following points are recorded in order to ensure the basis of the assessment is clear:

- This assessment is based on the methodology for proposed works as described in this report. Where changes to methodology occur, an ecologist will need to be consulted to determine if the changes need reassessment.
- Adverse weather can cause delays to the schedule and alter the timing of works. This has been accounted for using a worst-case scenario where necessary.

2 Project Description

2.1 The 'Project'

The proposed development is not directly connected with or necessary to the management of any Natura 2000 site and may have potential adverse impacts upon Natura 2000 sites in its vicinity. Therefore, the proposed project is subject to the requirements of the AA process.

2.2 Proposed project

South Dublin County Council proposes to carry out the following works in the townland of Whitestown and in Killinarden, Tallaght:

- Killinarden Park upgrade, total site area approx. 20ha; and
- Greenway infrastructure corridor with landscaped pedestrian/cycle routes between Killinarden Park and Sean Walsh Park, total site area approx. 4.50ha.

The works comprise:

- Strategic walk/cycleway with bat sensitive lighting along Whitestown Stream; new and enhanced entrances, including new road crossings at Killinarden Heights, Whitestown Drive, Whitestown Way and Killinarden Way/Killinarden Estate (with a revised carriageway arrangement); feature areas at primary and secondary accesses; a Primary Oval footpath and walking/exercise circuit 1km in length; existing secondary footpath network retained and resurfaced where required; and a new footbridge crossing the Whitestown Stream within the park.
- Replacement and new park perimeter walls/railings where required; retention of existing private walls/railings.
- Linear play trails, seating; two natural play areas; outdoor fitness and calisthenics equipment; a Multi-use Games and Skate Area; upgrade of existing grass sports pitches, to include re-levelling where required.
- Biodiversity and landscape improvements including a community orchard; wildflower meadows; surface water swale; willow clumps; native woodland; informal tree groups; signature trees; and retention of existing tree groups and scrub where shown.
- Installation of CCTV Cameras for monitoring by An Garda Siochána and South Dublin County Council.
- All ancillary works.

This work will be part of a Strategic Green Infrastructure Corridor with landscaped pedestrian/cycle routes between Killinarden Park and Sean Walsh Park (Figure 2-1). There is a long-term intention to relocate the section of route alongside the Traveller Accommodation Site (Figure 2-2) to a position that is further away from the Whitestown Stream, if and when the Traveller Accommodation Site is relocated in accordance with the Traveller Accommodation Programme for the County.

Figure 2-1 Proposed design layout of the upgrade to Killinarden Park and route of the Green Infrastructure Corridor. A larger version with a legend of this design is in Appendix A.

2.3 Site location

Killinarden Park is located in Tallaght, Co. Dublin (Figure 2-2). The park is surrounded by housing estates and slopes in a northerly direction from Killinarden Heights. Whitestown Stream flows through the northern section of the Park in an easterly direction. Past the park the steam flows through an area of unmade land between Tallaght Business Park into Sean Walsh Park to the east, along which the Strategic Corridor will continue.

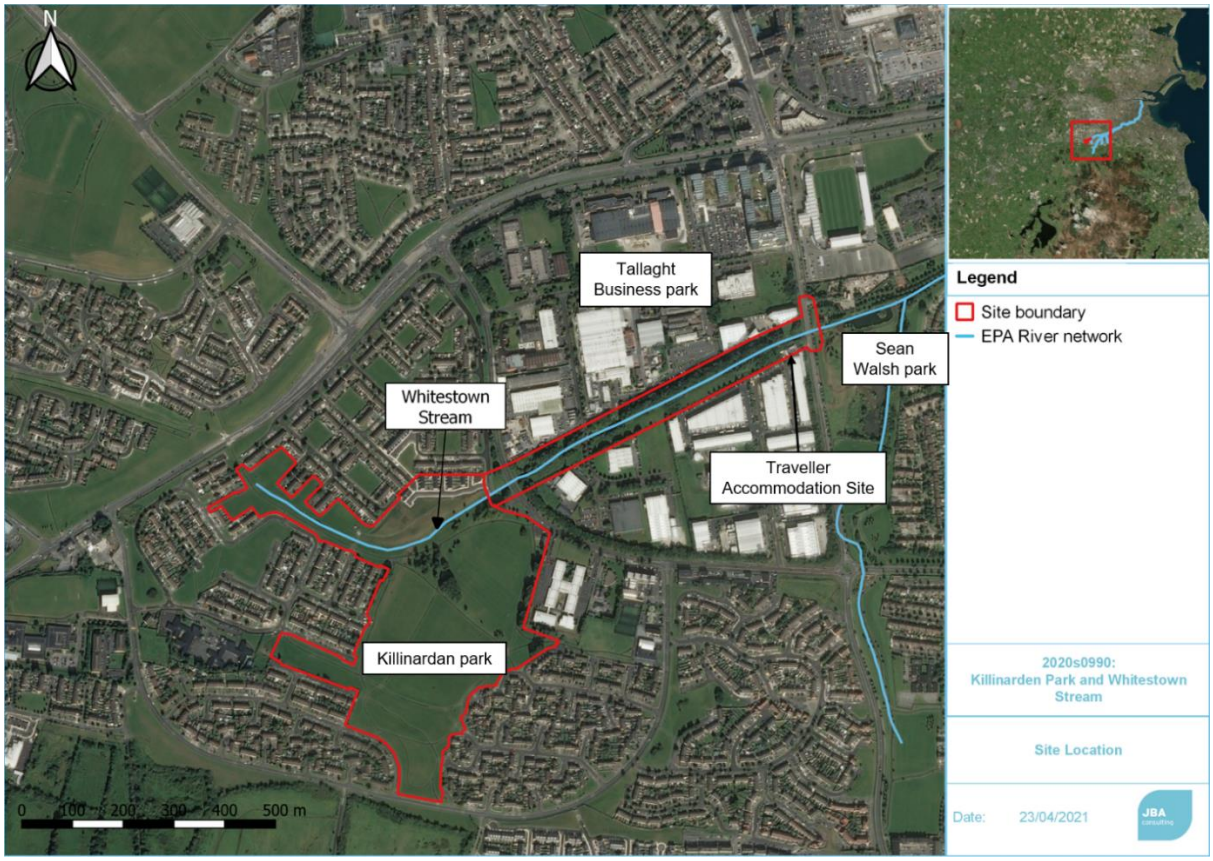

Figure 2-2: Site location (Imagery: Esri Satellite 2021)

2.4 Construction elements

The works will comprise of the following:

Construction of strategic corridor along Whitestown Stream:

- The strategic footpath and cycleway corridor along the south side of the Whitestown Stream, 4.0m wide shared surface, linking Killinarden Park to Sean Walsh Park
- The site is approximately 630 metres in length.
- The footpath/cycleway will require excavation to 300mm deep into unmade land, with 150mm subbase and 4.0metre in width, topped with Asphalt.
- Non-intrusive, motion sensor street lighting of 6m high mono-directional LED luminaires. The lighting poles will require 1.5m depth excavations.
- Installation of CCTV Cameras for monitoring by An Garda Siochána and South Dublin County Council

Upgrade to access and circulation within the park:

- Strategic walk/cycleway access to north side of park, along Whitestown Stream, 4.0m wide shared surface, a continuation of the strategic corridor that will link Killinarden to Sean Walsh Park.
- Creation of a fully accessible Primary Oval footpath, 3.0m wide, connecting the main park facilities and providing a walking/exercise circuit 1km in length, connected southwards across Killinarden Heights to the future Elder Park and onwards to the foothills and uplands;

- Non-intrusive, motion sensor street lighting of 6m high mono-directional LED luminaires at park entrances and along the strategic corridor. The lighting poles will require 1.5m depth excavations.
- Installation of CCTV Cameras for monitoring by An Garda Siochána and South Dublin County Council
- Enhanced primary pedestrian/cycle entrances to the park, including new road crossings at Killinarden Way to the North-east and Killinarden Heights to the south;
- Enhanced secondary pedestrian/cycle entrances by the existing pedestrian crossing on the N81 to the west, and at an improved crossing on Whitestown Way to the east;
- Feature areas at primary and secondary accesses, for gathering, seating and orientation;
- Existing secondary footpath network retained and resurfaced where required;
- One new bridge across the Whitestown Stream.

Upgrade to Boundary Treatments in park:

- Replacement and new public park perimeter wall/railings where required;
- Retention of existing private wall/railings;
- Pinch-points and bollards at all pedestrian/cycle access points to the park.

Installation of Recreation Facilities in park:

- Linear play trails along main walkways, with natural play equipment, sculptures and informal seating;
- Two natural play areas located around the Primary Oval, with nearby seating/social areas;
- Multi-use Games Area and Skate-ramp close to GAA Club, with teenager social space;
- Upgrade of existing grass sports pitches where required (e.g. re-levelling).

Landscape and Biodiversity in park:

- Continuous wildflower meadow around western side of park and extended along parts of Whitestown Stream, with pollinator-friendly native species;
- Drainage swale along western boundary, connected to Whitestown Stream;
- Clumps of willow scrub along Whitestown Stream for enhanced amenity and habitat creation;
- Continuous woodland around eastern side of park with native tree and shrub species;
- Community orchard to north of park with over 100 heritage fruit and nut trees;
- Informal tree groups dispersed throughout the park at key activity points;
- Semi-mature Signature Trees to reinforce the Primary Oval footpath;
- Existing tree groups retained;
- Existing trees and scrub along strategic cycle/pedestrian route retained and managed for biodiversity.

Existing Vegetation:

- All trees to be retained in accordance with BS5837:2012 ‘Trees in relation to design, demolition and construction – Recommendations’.

Table 2-1 Main Construction elements of landscape plan

Element	Description	Excavation depth (approx.)
Strategic walk/cycleway	Asphalt, 4.0m wide, 60mm th + 150mm sub-base	300mm
	Kerbs, PCC, 50x150mm	

	Lighting columns of 6m high pole, mono-directional LED luminaires with motion sensor	1.5m
Oval footpath	Asphalt, 3.0m wide, 60mm th + 150mm sub-base	300mm
	Kerbs, PCC, 50x150mm	
Entrance feature areas	Blockwork walls, rendered, average 1.2m high x 350mm wide	1.0m
	PCC pavers, 80mm th + 150mm sub-base	300mm
	Walls in PCC	1m
	PCC Pavers Surface	300mm
	Street lighting 6m high pole, mono-directional LED luminaires	1.5m
	Service ducts	600mm
Footbridge	Width=4m, length=35m max, Height=1.8m high ground piles	Pile depth=1.8m
MUGA	Artificial surface on 150mm sub-base	300mm
	Fencing and floodlights	1.5m
	Skate-ramp, conc.	600mm
Play equipment	Timber, various types, set in ground with conc. founds.	1.0m
CCTV		1.5m

3 Existing Environment

3.1 Baseline conditions

A habitat survey was carried out on the 29th June 2020 by JBA Ecologists Patricia Byrne and Malin Lundberg and JBB Ecologists Harry Jones and Namrata Kaile. Habitats were mapped using (Fossitt 2000).

3.2 Habitats

Habitats recorded at the site are presented in Table 3-1 and shown in Figure 3-1 and Figure 3-2(a larger map is provided in Appendix A). Each habitat is described in more detail in the following sections. None of the habitats recorded represent any Annex I habitats.

Table 3-1: List of habitats recorded on site

Habitats	Fossitt Habitat Code
Amenity grassland (improved)	GA2
Dry calcareous and neutral grassland	GS1
Wet grassland/ Dry calcareous and neutral grassland	GS4/ GS1
(Mixed) Broadleaved woodland	WD1
Treelines	WL2
Treelines / Hedgerow	WL2 / WL1
Treelines / Riparian woodland	WL2 / WN5
Scattered trees and parkland	WD5
Immature woodland	WS2
Scrub	WS1
Ornamental Scrub	WS3
Depositing/lowland rivers	FW2
Drainage ditches	FW4
Buildings and artificial surfaces	BL3

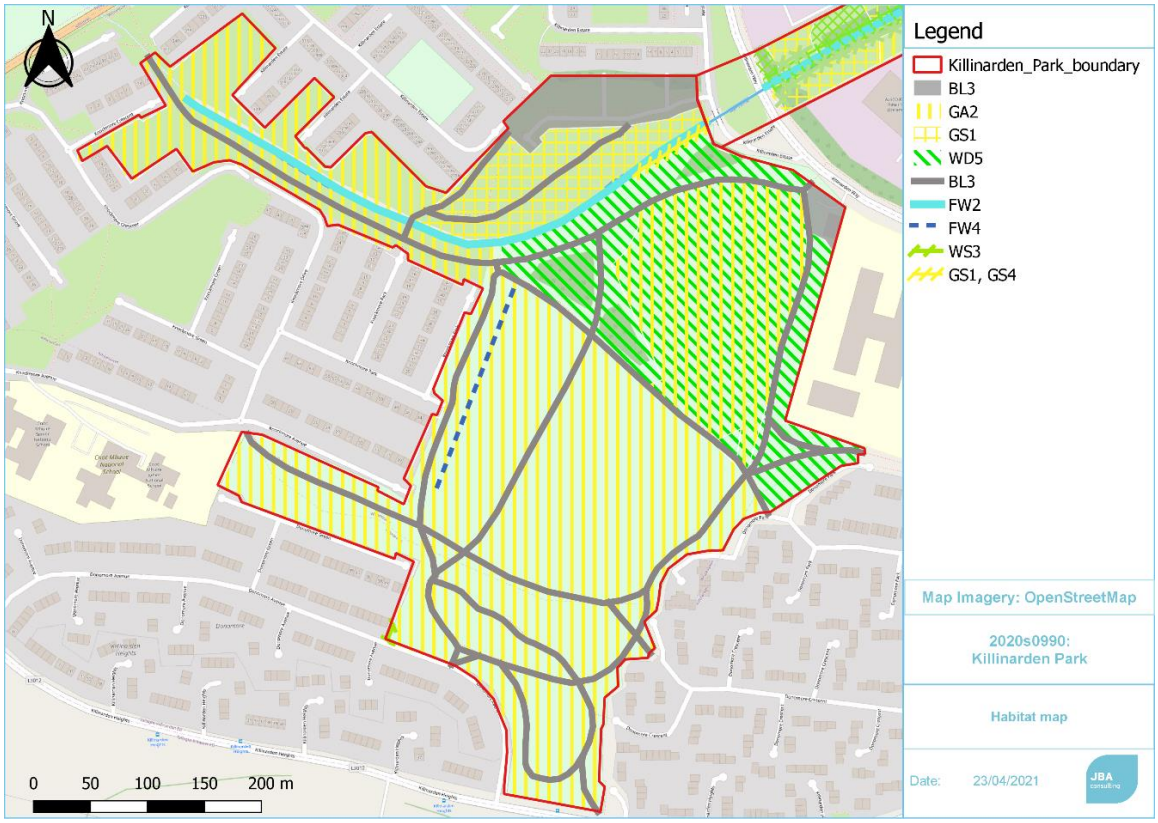

Figure 3-1: Habitat Map in Killinarden Park landscaping upgrade. See Appendix B for larger image.

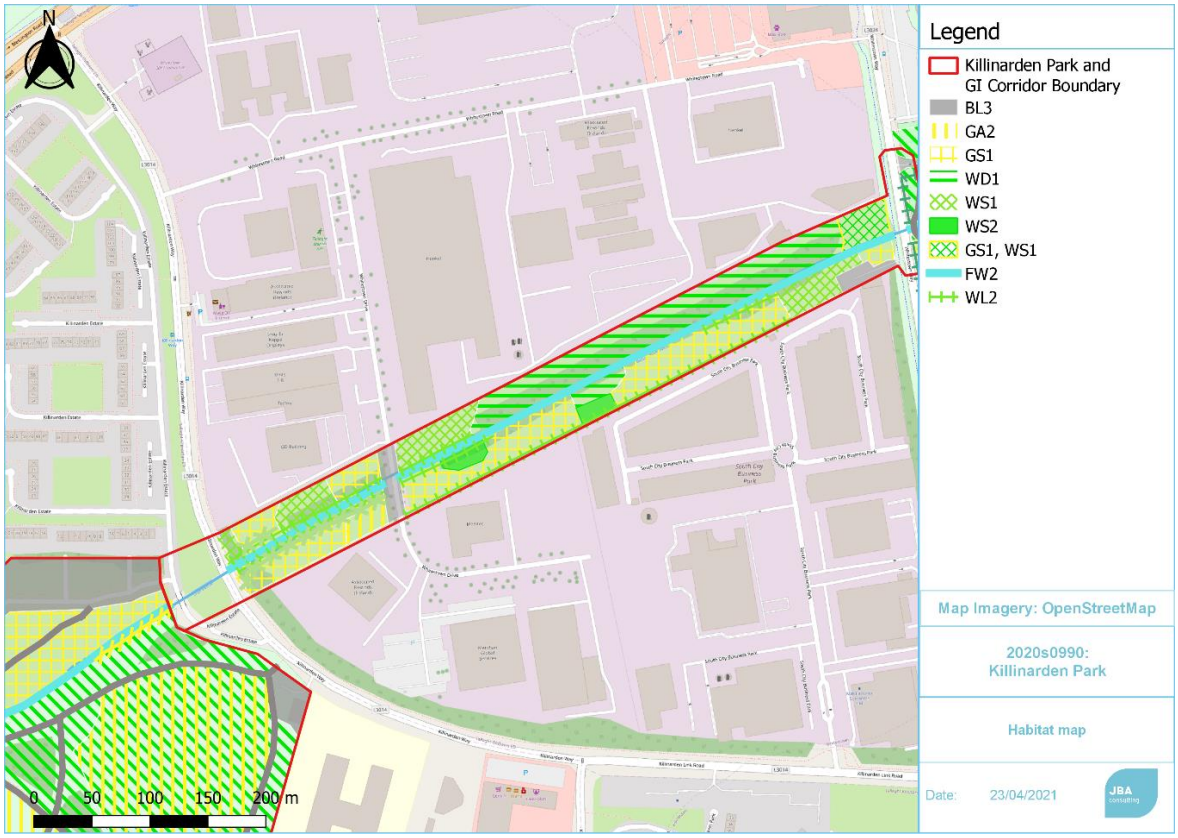

Figure 3-2 Habitat Map of Whitestown Stream strategic corridor. See Appendix B for larger image.

3.2.1 GA2 - Amenity grassland (improved)

The most widespread habitat in Killinarden Park is amenity grassland (Figure 3-2), with both mown and unmown areas. The grassland was dominated by Rye- grass *Lolium* spp., Bent *Agrostis* spp., Meadow grasses *Poa* spp. and Yorkshire Fog *Holcus lanatus*, with diverse herbs including; Red Clover *Trifolium pratens* White Clover *Trifolium repens*, Dandelions *Taraxacum* spp., Broadleaved Dock *Rumex obtusifolius*, Curled Dock *Rumex crispus*, Creeping Buttercup *Ranunculus repens*, Creeping Thistle *Cirsium arvense*, Ribwort Plantain *Plantago lanceolata*, Ragwort *Jacobaea vulgaris*, Shepherd's Purse *Capsella bursa-pastoris*, Pineappleweed *Matricaria discoidea*, Common Knapweed *Centaurea nigra*, Common Daisy *Bellis perennis*, Bird's-foot Trefoil *Lotus corniculatus*, Oxeye Daisy *Leucanthemum vulgare*, Yarrow *Achillea millefolium*, Common Poppy *Papaver rhoeas*, Red Dead-nettle *Lamium purpureum*, Sun Spurge *Euphorbia helioscopia,* Smooth Hawk's-beard *Crepis capillari*s, Willowherbs *Epilobioum* spp. and Self-heal *Prunella vulgaris*.

Areas of uncut grass adjacent to walls at the park boundaries included False Oat-grass *Arrhenatherum elatius*, Yorkshire Fog, Common Couch *Elymus repens*, Common Nettle *Urtica dioica*, Silverweed *Potentilla anserina*, Colt's-foot *Tussilago farfara*, Bramble *Rubus fruticosus* agg, Vetch *Vicia* spp., Dog-rose *Rosa canina*, Horsetail *Equisetum* spp., and Creeping Cinquefoil *Potentilla reptans.* Ivy *Hedera helix* was seen on some walls.

There is a small area of amenity grassland along Whitestown Stream, west of Whitestown Drive and south of the stream, which is being managed.

Figure 3-3: Killinarden Park- amenity grassland

3.2.2 GS1 -Dry calcareous and neutral grassland

Semi-natural grassland occurred in Killinarden Park where the grass was unmown, especially on the banks of Whitestown Stream, and on the parkland area north of Whitestown Stream. Vegetation near the banks included Red Clover, Self-heal, Silverweed, Meadow Buttercup *Ranunculus acris*, Oxeye

Daisy, Curled Dock, False Oat-grass, Ribwort Plantain, Cowslip *Primula veris* (seedheads visible), and Common Spotted-orchid.

The soil on the ground to the north of the watercourse was stony and dry, and included Fescue grasses, Vetch spp., Red and White Clover, Weld *Reseda luteola* and Common Centaury *Centaurium erythraea*.

Neutral grassland is the dominating habitat along the south side of the Whitestown stream and occurs in patches on the north side (Figure 3-7). These areas were unmown and appear to not be mowed regularly. Vegetation included Herb Robert *Geranium robertanium*, Common Knapweed *Centaurea nigra*, Cinquefoil *Potentilla* spp., False Oat-grass *Arrhenatherum elatius*, Ribwort Plantain *Plantago lanceolata*, Yorkshire Fog *Holcus lanatus*, Dandelions *Taraxacum* spp., Cow Parsley *Anthriscus sylvestris*, Willowherb *Epilobium* spp., Black Medick *Medicago lupulina*, Vetches *Vicia* spp., Hogweed *Heracleum sphondylium*, Red Clover *Trifolium pratense*, Silver Weed *Potentilla anserina*, Cock's-foot *Dactylis glomerata*, Bird's-foot Trefoil *Lotus corniculatus*, Horsetail *Equisetum* spp., Cowslip *Primula veris*, Goat's-beard *Tragopogon pratensis* and Self-heal *Prunella vulgaris*, some Teasel *Dipsacus fullonum* occurring in the eastern most area. There are some patches of Bramble *Rubus fruticosus* agg. and Dogwood *Cornus sanguinea* within the grassland area.

There were several mammal paths in the area and a Fox *Vulpes vulpes* was sighted during the survey.

Figure 3-4: Semi-natural grassland by Whitestown Stream

Figure 3-5: Semi-natural grassland with Common Centaury

Figure 3-6: Common Spotted Orchid and Ox-eye Daisy

Figure 3-7: Dry neutral grassland and treeline/riparian woodland along Whitestown Stream

3.2.3 GS4 - Wet grassland

Wet grassland occurred along the banks of the watercourse and included a small area of Soft rush *Juncus effusus,* Meadowsweet *Filipendula ulmaria*, Hogweed *Heracleum sphondylium* and Willowherb.

3.2.4 WD1 - (Mixed) Broadleaved woodland

Broadleaved woodland dominates the north side of the stream and occur in one stand on the south side of the stream. Species include Aspen, Sycamore, Willows, Ash and Silver Poplar. The understory consists of Bramble, Herb Robert and Ivy *Hedera hibernica*, and some trees a covered with Ivy.

3.2.5 WL2 - Treelines

Treelines occur on both sides along the stream in Whitestown Stream GI corridor. Species include Ash, Silver Poplar, Willows and Sycamore.

3.2.6 WL2 / WL1 - Treeline / Hedgerow

In the Whitestown Stream corridor a treeline and hedgerow runs along the south border, east of Whitestown Drive (Figure 3-8). The trees consist of Norway Maple *Acer platanoides*, Birch *Betula* spp. and Silver Poplar, and the hedgerow species include Dogwood and Guelder-rose *Viburnum opulus*.

Figure 3-8: Treeline / hedgerow along southern boundary of Whitestown Stream corridor.

3.2.7 WL2 / WN5 - Treeline / Riparian woodland

There is a section of the stream, east of Whitestown Drive, where there is a regeneration of riparian woodland on both sides of the stream. These treelines are dominated by Willows, but also include Ash, Hazel *Corylus avelana*, Elm *Ulmus* spp., Oak *Quercus* spp., Alder *Alnus* spp. and Sycamore.

3.2.8 WD5 - Scattered trees and parkland

Aspen *Populus tremula* was the dominant tree recorded and was scattered in groups throughout Killinarden Park. Other trees included Hornbeam *Carpinus betulus*, Oak *Quercus* spp., Beech *Fagus sylvatica*, Field Maple *Acer camastre*, Silver Birch *Betula pendula* and Sycamore *Acer pseudoplantus*. A number of Alder *Alnus glutinosa* occurred beside the watercourse.

Figure 3-9: Birch trees in Killinarden Park

3.2.9 WS2 - Immature woodland

A small area of Aspen and Oak seedlings occurred beside an area of mature Aspen, Oak and Beech in Killinarden Park.

Immature woodland occurs on the North side of Whitestown Stream, mainly consisting of saplings of Aspen and Silver Poplar *Populus alba*.

3.2.10 WS1 - Scrub

Scrub is emerging mainly in the grassland north of the Whitestown Stream but also in patches on the south side. Bramble is dominating, Dogwood, Sycamore *Acer pseudoplatanus*, Aspen *Populus tremula*, Ash *Fraxinus excelsior*, Willow *Salix* spp. and Dog Rose *Rosa canina* also occur. Some ornamental scrub occurs close to the Whitestown Drive bridge crossing the stream and the invasive species Chinese Bramble *Rubus tricolor* was recorded at several locations along the stream.

3.2.11 WS3 - Ornamental/non-native shrub

A small area of ornamental/non-native shrubs was located at the south of the site at the boundary with Donomore Avenue.

3.2.12 FW2 - Depositing/lowland rivers

Whitestown Stream flowed in an easterly direction in the northern part of the Killinarden Park. The stream flowed over a concrete base and there were a series of shallow weirs (Figure 3-11). Instream vegetation included Fool's Watercress *Apium nodiflorum.*

As the stream leaves Killinarden Park and flows into Whitestown Stream GI corridor of the project, the watercourse is shaded by trees on each side of the stream. The stream is approximately 3m wide and 10cm deep, the substrate is silty. Instream vegetation include Fool's Watercress *Apium nodiflorum* and Water-cress *Nasturtium officinale*. The stream is fringed by Broadleaved dock *Rumex obtusifolius*, Figwort *Scrophularia* spp., Nettles *Urtica dioica*, Thistles *Cirsium* spp., Meadow buttercup *Ranunculus acris*, Horsetail, Meadowsweet *Filipendula ulmaria*, Cleavers *Galium aparine*, Willowherb and Pendulous Sedge *Carex pendula*.

Grey Heron *Ardea cinerea* and Kingfisher *Alcedo atthis* were observed along the stream during the survey.

Figure 3-10: Whitestown Stream in Killinarden Park with instream vegetation – looking west

Figure 3-11: Whitestown Stream with concrete base in Killinarden park

3.2.13 FW4 - Drainage ditch/ Swale

A swale was located at the west of Killinarden Park running in a north -south direction. The swale was grassy and dry at the time of the survey, and species recorded included Watercress, Creeping Buttercup, Hogweed, Willowherb, Water Figwort *Scrophularia auriculata*, Black Medick *Medicago lupulina*, Common Centaury, Meadow Buttercup and Weld. Paperbark Birch *Betula papyrifera* was recorded adjacent to it.

3.2.14 BL3 - Buildings and artificial surfaces

A network of tarmac paths traverses Killinarden Park. A number of pedestrian bridges cross over Whitestown Stream.

3.3 Waterbodies within the Vicinity of the Proposed Site

Whitestown Stream flows in a west to east direction and passes through the northern section of Killinarden Park and along the linear corridor that bisects Whitestown Business Park. Whitestown Stream is culverted upstream of Killinarden Park. Whitestown Stream joins the River Dodder approximately 3.25km downstream of the proposed site River Dodder, which originates from Dublin Mountains, and outfalls into River Liffey by the Grand Canal Docks before reaching Dublin Bay and the Irish Sea.

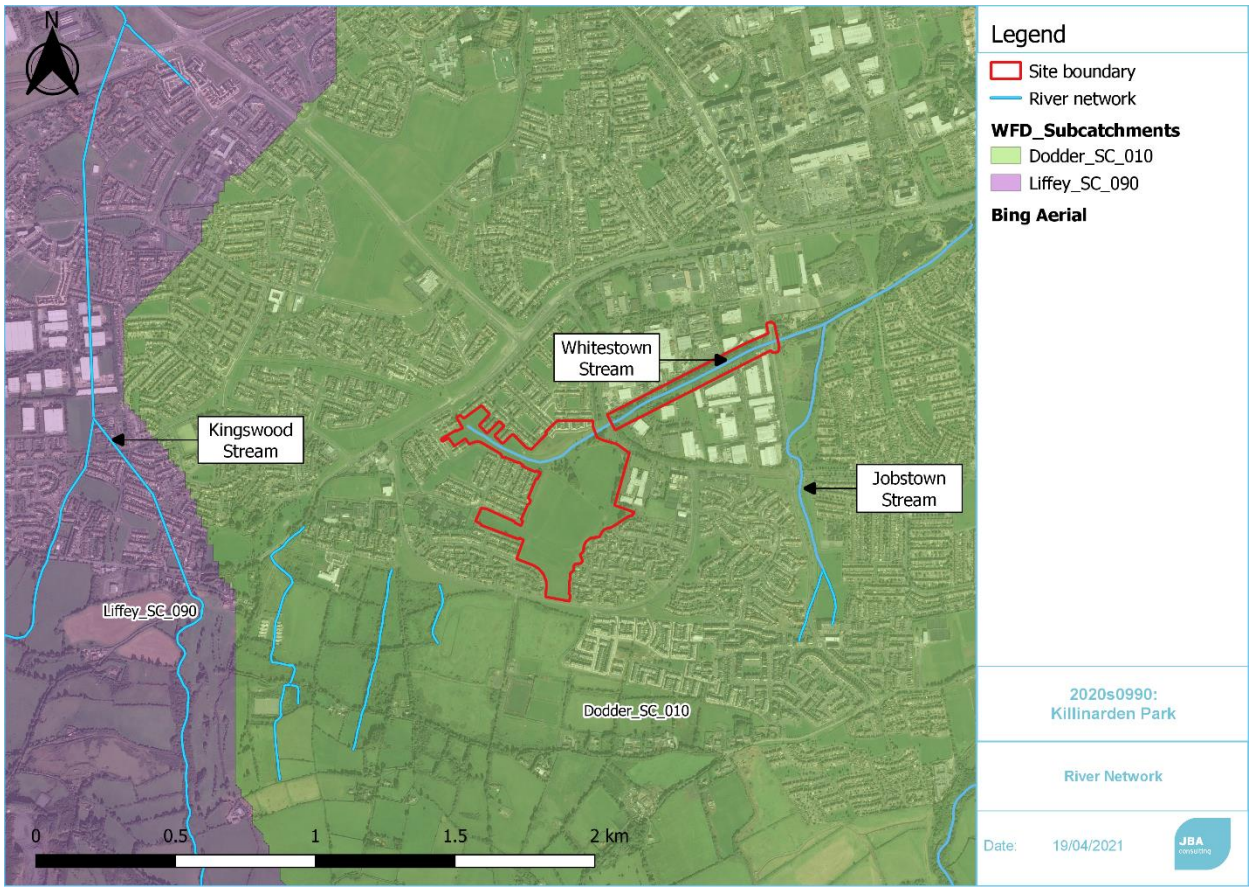

Figure 3-12 Waterbodies within the vicinity of the proposed site

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4 Natura 2000 Sites

The DEHLG (2009) guidance identifies that Screening for Appropriate Assessment of a plan or project should consider the following Natura 2000 sites:

- Any Natura 2000 sites within or adjacent to the plan or project area.
- Any Natura 2000 sites within the likely zone of impact of the plan or project. This is dependent on the nature and scale of the plan, with 15km generally recommended for plans, but potentially much less for projects.
- Any Natura 2000 sites that are more than 15km from the plan or project area, but may potentially be impacted upon, for example, through a hydrological connection.

The scale of proposed works are considered of 'Project' status. Given that there is a pathway via surface water between Killinarden Park and Dublin Bay, Natura 2000 sites within a 15km range of the proposed development were examined. The Natura 2000 sites within the range are listed in Table 4-1 below and their locations are shown in Figure 4-1.

4.1.1 Project Area of Influence

The project will primarily affect the site only, but a wider area of influence is used for impacts relating to noise disturbance (1km), air pollution (10km), surface water (15km), with an additional 2km from connecting transitional waters to coastal areas; and any supporting habitat for SAC/SPA species (15km).

Table 4-1: Natura 2000 sites located within the 15km Zone of Influence (ZoI) of the proposed development.

Natura 2000 site	Site Code	Approximate direct distance from site	Surface water connection?
Glenasmole Valley SAC	001209	2.0km	No
Wicklow Mountains SAC	002122	4.0km	No
Wicklow Mountains SPA	004040	7.5km	No
Rye Water Valley/Carton SAC	001398	11.4km	No
South Dublin Bay and River Tolka Estuary SPA	004024	12.6km	Yes
South Dublin Bay SAC	000210	12.6km	Yes
Poulaphouca Reservoir SPA	004063	12.1km	No
Knocksink Wood SAC	000725	13.2km	No
Red Bog, Kildare SAC	000397	12.8km	No
North Bull Island SPA	004006	15.6km	Yes
North Dublin Bay SAC	000206	15.6km	Yes

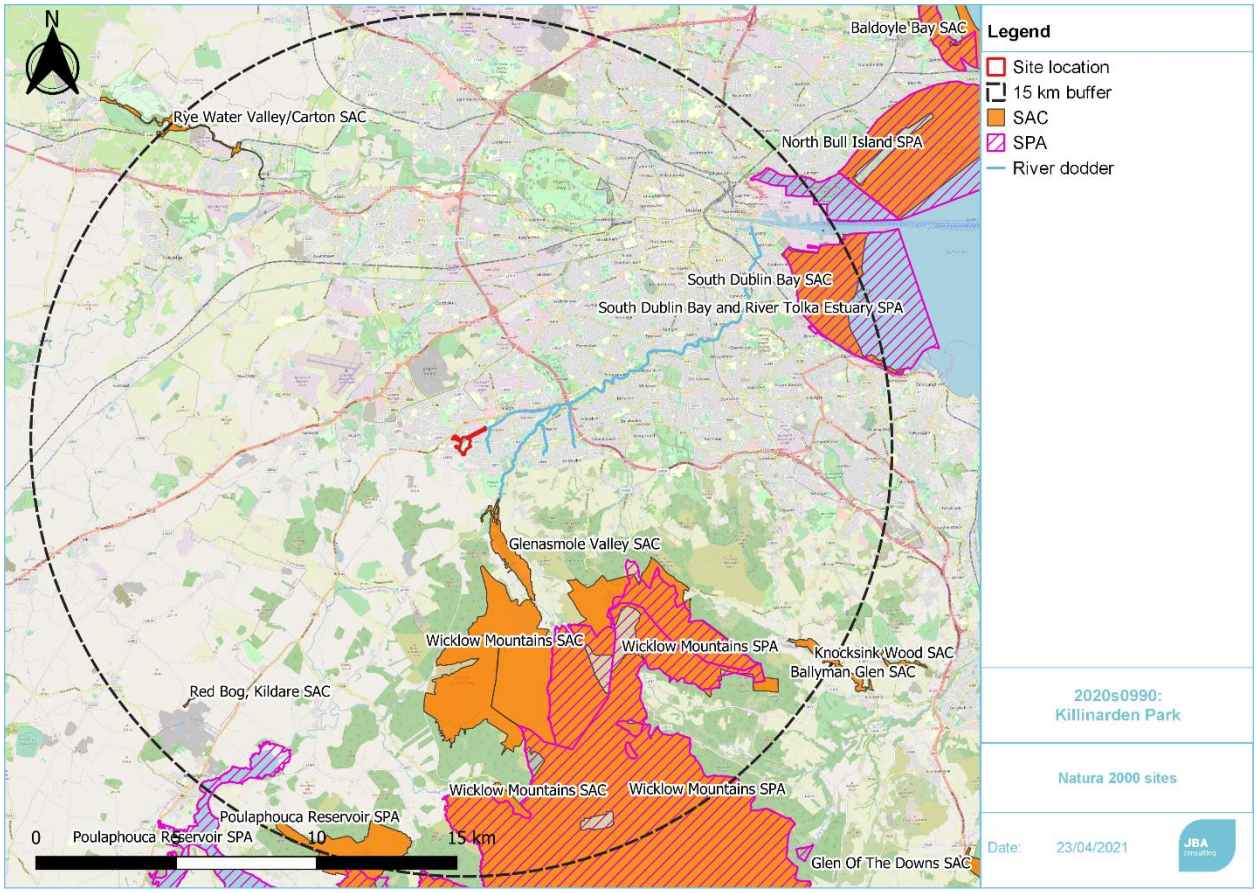


Figure 4-1: Natura 2000 sites and site location.

The proposed project to upgrade Killinarden Park is considered to be small scale, and will mainly have a local impact.

The Dublin Bay Natura 2000 sites that are considered to be within 15km and hydrologically linked via Whitestown Stream, River Dodder and Dublin Bay are:

- South Dublin Bay and River Tolka Estuary SPA,
- South Dublin Bay SAC,
- North Bull Island SPA
- North Dublin Bay SAC

The Natura 2000 sites that are within 10km potentially at risk from air pollution are:

- Glenasmole Valley SAC
- Wicklow Mountains SAC
- Wicklow Mountains SPA

The Natura 2000 sites that are within 1km potentially at risk from noise pollution are:

- No sites

All other Natura 2000 sites are outside of the ZoI due to the distance (>10km) from the proposed site and the lack of surface water pathways. The Natura 2000 sites listed above that are considered to be within the ZoI are described in detail in Table 4-2.

Table 4-2: Site briefs; Qualifying Interests; and project-relevant threats /pressures and their impacts and sources in relation to the Natura 2000 sites within the ZoI (plus hydrological connectivity extension).

Site Name	Brief	Qualifying Interests	Project Relevant Threats / Pressures: Impact (Source)
Glenasmole Valley SAC	Glenasmole Valley lies at the northern foothills of the Dublin and Wicklow Mountains. Spring lines occur along both sides of the northern part of the valley. The River Dodder flows through the valley and within the site the river has been impounded to form two reservoirs. Associated with the reservoirs are areas of swamp and marsh vegetation. The valley is heavily wooded, mostly with mixed woodland of both deciduous and coniferous species. Dry calcareous pasture grassland, improved to varying degrees, is a main habitat of the valley sides and occurs in association with wet grassland and, in places of seepage, fen or marsh type vegetation. The site has important examples of petrifying springs. Good examples of orchid rich calcareous grassland, including *Pseudorchis albida* (legally protected) and *Orchis morio* (Red Data Book species) are found here. Molinia meadows are also represented (NPWS, 2013).	- Semi-natural dry grassland and scrubland facies on calcareous substrates (Festuco-Brometalia) (*important orchid sites) [6210] - Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) [6410] - Petrifying springs with tufa formation (Cratoneurion)* [7220] (NPWS, 2020)	**Diffuse groundwater pollution due to non-sewered population:** Moderate Impact (outside) **Mowing / cutting of grassland:** Low Impact (outside) **Diffuse pollution to surface waters due to agricultural and forestry activities:** Moderate Impact (outside) **Diffuse pollution to surface waters due to household sewage and waste waters:** Moderate Impact (outside) (NPWS, 2017).
Wicklow Mountain SAC	An extensive upland site comprising much of the Wicklow Mountains and extending into Co. Dublin. The site includes the headwaters of several major rivers, including the Liffey, the Dargle and the Slaney. Exposed rock and scree are included in the features found in the SAC. The dominant habitats on the site are blanket bog, heaths and upland grassland. The site comprises the largest complex of upland habitats in eastern Ireland, with important examples of blanket bog, wet heath and dry heath, extensive in area and mostly of good quality. Alpine heath occurs at high levels, along with calcareous and siliceous rocky habitats harbouring an arctic-alpine flora. A fine series of oligotrophic lakes occur, with some recorded to contain Arctic char (*Salvelinus alpinus*). Several oakwoods of moderate quality, typical of the dry acidic woods of eastern	- Otter (*Lutra lutra*) [1355] - Oligotrophic water containing very few minerals of sandy plains (*Littorelletalia uniflorae*) [3110] - Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletalia uniflorae* and/or *Isoeto-Nanojuncetea* [3130] - Natural dystrophic lakes and ponds [3160] - Northern Atlantic wet heaths with *Erica tetralix* [4010] - European dry heaths [4030]	N/A

Site Name	Brief	Qualifying Interests	Project Relevant Threats / Pressures: Impact (Source)
	Ireland, are found. Seven Red Data Book plant species occur, including the rare Alpine Lady's-mantle (*Alchemilla alpina*) and *Nitella gracilis* at its only Irish station. The site supports significant populations of breeding Merlin (*Falco columbarius*) and Peregrine Falcon (*Falco peregrinus*). The site is important for rare breeding passerines of oakwoods, notably Common Redstart (*Phoenicurus phoenicurus*) and Wood Warbler (*Phylloscopus sibilatrix*). The site also has breeding Ring Ouzel (*Turdus torquatus*) and Red Grouse (*Lagopus lagopus*). Eurasian Otter (*Lutra lutra*) occurs on several of the riverine systems (NPWS, 2017b).	- Alpine and Boreal heaths [4060] - Calaminarian grasslands of the *Violetalia calaminariae* [6130] - Species-rich Nardus grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe) * [6230] - Blanket bogs (* if active bog) [7130] - Siliceous scree of the montane to snow levels (*Androsacetalia alpinae* and *Galeopsietalia ladani*) [8110] - Calcareous rocky slopes with chasmophytic vegetation [8210] - Siliceous rocky slopes with chasmophytic vegetation [8220] - Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0] (NPWS, 2017c)	
Wicklow Mountains SPA	The dominant habitats present are blanket bog, heaths and upland grassland. Fine examples of native Oak woodlands are found in the Glendalough area. The site, which is within the Wicklow Mountains National Park, is fragmented into about 20 separate parcels of land. The site supports good examples of both upland and woodland bird communities. It has breeding *Falco columbarius* and *Falco peregrinus*, as well as *Turdus torquatus* and *Lagopus lagopus*, both of the latter being Red-listed in Ireland. It is the only site in Ireland where *Mergus merganser* breeds regularly. It is important for rare breeding passerines of oak woods, notably *Phoenicurus phoenicurus* and *Phylloscopus sibilatrix*. It also has *Sylvia borin* and *Sylvia atricapilla*.	- Merlin (*Falco columbarius*) [A098] - Peregrine (*Falco peregrinus*) [A103] (NPWS, 2020b)	N/A

Site Name	Brief	Qualifying Interests	Project Relevant Threats / Pressures: Impact (Source)
	(NPWS, 2018)		
South Dublin Bay SAC	This intertidal site extends from the South Wall at Dublin Port to the West Pier at Dun Laoghaire, a distance of c. 5km. The seaward boundary is marked by the low tide mark, while the landward boundary is now almost entirely artificially embanked. A small sandy beach occurs at Merrion Gates, while some bedrock shore occurs near Dun Laoghaire. The designated site possesses a fine and fairly extensive example of intertidal flats. Sediment type is predominantly sand, with muddy sands in the more sheltered areas. A typical macro-invertebrate faunal assemblage exists within the SAC. The SAC has the largest stand of Dwarf Eelgrass (*Zostera nolti*) on the east coast. It also supports part of the important wintering waterfowl populations of Dublin Bay (NPWS, 2015)	- Mudflats and sandflats not covered by seawater at low tide [1140] - Annual vegetation of drift lines [1210] - Salicornia and other annuals colonising mud and sand [1310] - Embryonic shifting dunes [2110] (NPWS, 2013b)	**Discharges:** Moderate Impact (both) **Accumulation of organic material:** High Impact (inside) (NPWS, 2018b)
South Dublin Bay and River Tolka Estuary SPA	This designated site comprises a substantial part of Dublin Bay. It includes virtually all of the intertidal area in the south bay, as well as much of the Tolka Estuary to the north of the River Liffey. The site possesses extensive intertidal flats which support wintering waterfowl which are part of the overall Dublin Bay population. It regularly has an internationally important population of Brent Geese, which feeds on Dwarf Eelgrass in the autumn. It has nationally important numbers of a further 6 species including: Oystercatcher (*Haematopus ostralegus*), Ringed Plover (*Charadrius hiaticula*), Red Knot (*Calidris canutus*), Sanderling (*Calidris alba*), Dunlin (*Calidris alpina*) and Bar-tailed Godwit (*Limosa lapponica*). It is an important site for wintering gulls, especially Black-headed Gull (*Chroicocephalus ridibundus*) and Common Gull (*Larus canus*). South Dublin Bay is the premier site in Ireland for Mediterranean Gull (*Larus melanocephalus*), with up to 20 birds present at times. Is a regular autumn roosting ground for significant numbers of terns, including Roseate Terns	- Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] - Oystercatcher *(Haematopus ostralegus*) [A130] - Ringed Plover (*Charadrius hiaticula*) [A137] - Grey Plover (*Pluvialis squatarola*) [A141] - Red Knot (*Calidris canutus*) [A143] - Sanderling *(Calidris alba*) [A144] - Dunlin (*Calidris alpina*) [A149] - Bar-tailed Godwit (*Limosa lapponica*) [A157] - Redshank (*Tringa totanus*) [A162] - Black-headed Gull (*Chroicocephalus ridibundus*) [A179] - Roseate Tern (*Sterna dougallii*)	**Discharges:** High Impact (inside) (NPWS, 2017d)

Site Name	Brief	Qualifying Interests	Project Relevant Threats / Pressures: Impact (Source)
	(*Sterna dougallii*), Common Tern (*Sterna hirundo*) and Artic Tern (*Sterna paradisaea*) (NPWS, 2017d).	[A192] - Common Tern (*Sterna hirundo*) [A193] - Arctic Tern (*Sterna paradisaea*) [A194] - Wetland and Waterbirds [A999] (NPWS, 2015b)	
North Bull Island SPA	The North Bull Island sand spit is a relatively recent depositional feature, formed as a result of improvements to Dublin Port during the 18th and 19th centuries. The site is among the top ten sites for wintering waterfowl in the country. It supports internationally important populations of Brent Goose and Bar-tailed Godwit and is the top site in the country for both of these species. A further 14 species have populations of national importance, with particular notable numbers of Shelduck (*Tadorna Tadorna*), Pintail (*Anas acuta*), Grey Plover (*Pluvialis squatarola*), and Red Knot. The SPA is a regular site for passage waders such as Ruff (*Philomachus pugnax*), Curlew Sandpiper (*Calidris ferruginea*) and Spotted Redshank (*Tringa erythropus*). The site supports Short-eared Owl (*Asio flammeus*) in winter. The site provides both feeding and roosting areas for the waterfowl species. Habitat quality for most of the estuarine habitats is very good (NPWS, 2017e).	- Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] - Shelduck (*Tadorna tadorna*) [A048] - Teal (*Anas crecca*) [A052] - Pintail (*Anas acuta*) [A054] - Shoveler (*Anas clypeata*) [A056] - Oystercatcher (*Haematopus ostralegus*) [A130] - Golden Plover (*Pluvialis apricaria*) [A140] - Grey Plover (*Pluvialis squatarola*) [A141] - Red Knot (*Calidris canutus*) [A143] - Sanderling (*Calidris alba*) [A144] - Dunlin (*Calidris alpina*) [A149] - Black-tailed Godwit (*Limosa limosa*) [A156] - Bar-tailed Godwit (*Limosa lapponica*) [A157] - Curlew (*Numenius arquata*) [A160] - Redshank (*Tringa totanus*) [A162] - Turnstone (*Arenaria interpres*) [A169] - Black-headed Gull (*Chroicocephalus ridibundus*) [A179]	**Discharges:** Moderate Impact (both) (NPWS, 2017e)

Site Name	Brief	Qualifying Interests	Project Relevant Threats / Pressures: Impact (Source)
		- Wetland and Waterbirds [A999] (NPWS, 2015c)	
North Dublin Bay SAC	The North Bull Island sand spit is a relatively recent depositional feature, formed as a result of improvements to Dublin Port during the 18th and 19th centuries. It is almost 5km long and 1km wide and runs parallel to the coast between Clontarf and Sutton. The seaward side of the island has a fine sandy beach. A substantial area of shallow marine water is included in the site. The North Bull Island dune system is one of the most important systems on the east coast and is one of the few in Ireland that is actively accreting. It possesses extensive and mostly good quality examples of embryonic, shifting marram and fixed dunes, as well as excellent examples of humid dune slacks. Both Atlantic and Mediterranean salt marshes are well represented, and a particularly good marsh zonation is shown. The salt marshes grade into mudflats and sandflats, some of which are dominated by annual Salicornia species. Petalwort (*Petalophyllum ralfsii*) occurs at its only known station away from the western seaboard. The site has five Red Data Book vascular plant species and four Red Data Book bryophyte species (NPWS, 2017f).	Mudflats and sandflats not covered by seawater at low tide [1140] - Annual vegetation of drift lines [1210] - Salicornia and other annuals colonising mud and sand [1310] - Atlantic salt meadows (*Glauco-Puccinellietalia maritima*e) [1330] - Mediterranean salt meadows (*Juncetalia maritimi*) [1410] - Embryonic shifting dunes [2110] - Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120] - Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] - Humid dune slacks [2190] - Petalwort *(Petalophyllum ralfsii*) [1395] (NPWS, 2013c)	**Diffuse pollution to surface waters due to other sources not listed:** Moderate Impact (inside) **Discharges:** High Impact (inside) **Other point source pollution to surface water:** Moderate Impact (inside) (NPWS, 2017f).

* = priority Annex I habitat

5 Screening Assessment

5.1 Introduction

This screening exercise will focus on assessing the likely adverse effects of the project on the Natura 2000 sites identified in Section 4 above.

This section identifies the potential impacts which may arise as a result of the proposed project. It then goes on to identify how these impacts could potentially impact on Natura 2000 sites listed in Table 4-1. The significance of potential impacts is also assessed, with any potential in-combination effects also identified.

The Natura 2000 sites to be assessed, with distances from the proposed project, are:

- Glenasmole Valley SAC - 2km
- Wicklow Mountains SAC - 4km
- Wicklow Mountains SPA - 7.5km
- South Dublin Bay and River Tolka Estuary SPA - 12.6km
- South Dublin Bay SAC - 12.6km
- North Bull Island SPA - 15.6km
- North Dublin Bay SAC - 15.6km

5.2 Assessment Criteria

5.2.1 Description of the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the Natura 2000 sites

Potential adverse impacts that could cause a significant effect on the qualifying interests of the Natura 2000 sites, during the construction and operational phases of the project, will impact on the sites via surface water pathways, groundwater pathways and land and air pathways. Surface water pathways can impact on surface water quality and surface water dependent habitat quality. Groundwater pathways can impact on groundwater quality and quality of groundwater dependent habitats. Land and air pathways can impact by release or discharges of sediment or chemicals to surface or groundwater.

The proposed project is not anticipated to impact on the qualifying interests of any of the identified SACs or SPAs due to the absence of pathways between any potential source of impact and receiving environment in the case of the Natura 2000 sites. The rationale for excluding impacts via the main pathways is given in more detail in the following section.

5.2.2 Surface Water Pathways

The proposed project has surface water connectivity with four Natura 2000 sites located in Dublin Bay via Whitestown Stream, and the Dodder River, and is part of the Dodder Catchment (Dodder_SC_010) which enters the River Liffey at Ringsend and then Dublin Bay (as shown in Figure 5-1).

- South Dublin Bay and River Tolka Estuary SPA
- South Dublin Bay SAC,
- North Bull Island SPA,
- North Dublin Bay SAC

These four Natura 2000 sites are located downstream of the proposed site, along 16km of the River Dodder/Whitestown Stream pathway and 2km of the River Liffey/ Dublin Bay pathway for a total of 18km of river surface pathway.

The proposed project has no surface water connectivity with Wicklow Mountain SAC as tare in different river catchments. Glenasmole Valley SAC is located in the River Dodder Catchment but is located upstream on a separate tributary from the Dodder River to the Whitestown Stream (as shown in Figure 5-1).

Given the small scale of the project, no change in site drainage, the distance of 16km of river pathway downstream to the Natura 2000 sites, with a high degree of dilution by large body of coastal waters, it is not anticipated that any potential impact to these Natura 2000 sites will be significant.

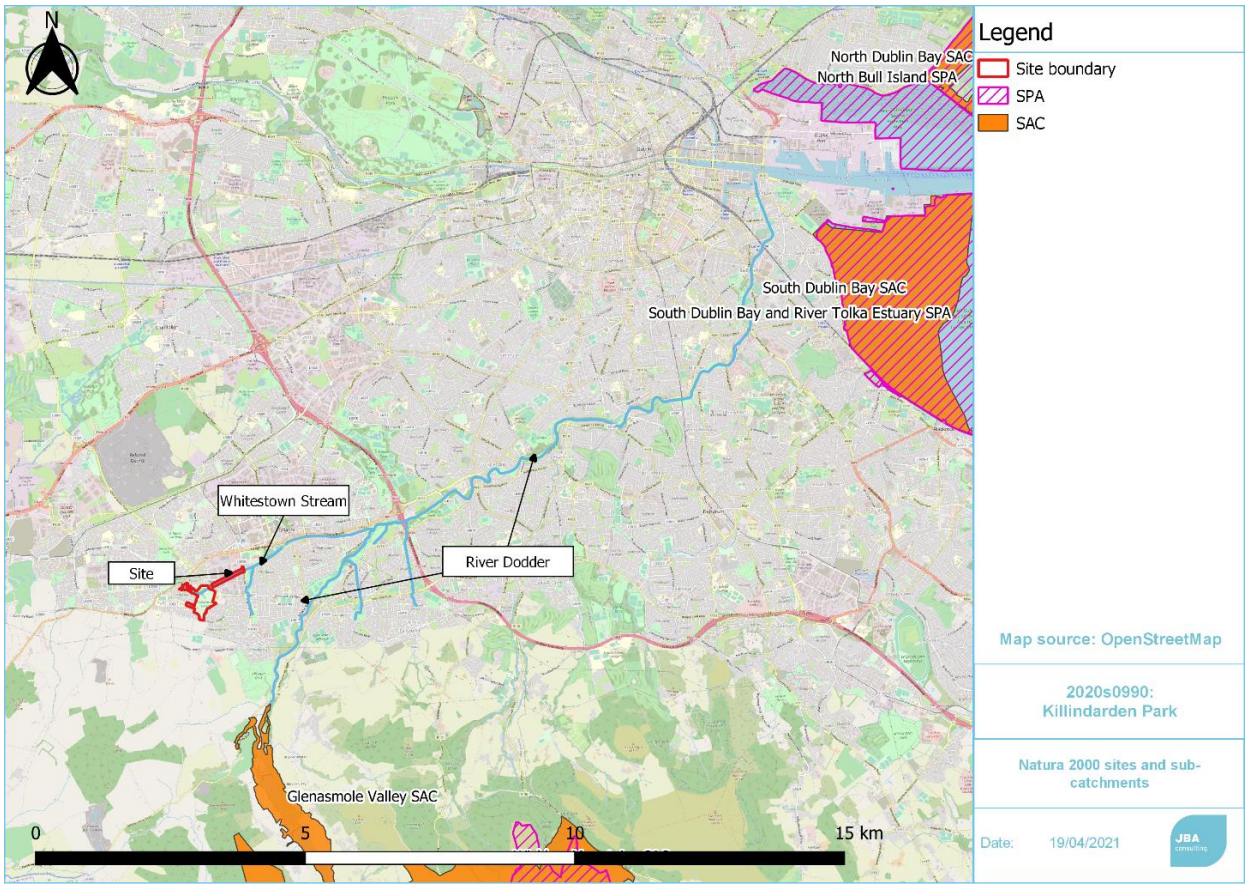


Figure 5-1: Site location and Natura 2000 sites, with surface water pathway via the River Dodder to Dublin Bay.

5.2.3 Groundwater

The majority of the site is located within Ground waterbody IE_EA_G_008 which has a poorly productive bedrock. The aquifer vulnerability in the immediate surrounding area of the proposed site is ranked as 'Low' Figure 5-2. A small section of the site is located in 'high' aquifer vulnerability but the only works taking place will be upgrading a secondary entrance which will be on built ground and is not connected to a Natura 2000 site (Figure 5-2).

The proposed works generally only require shallow excavations, the deepest excavations are for the footbridge piling works which will be to a depth of 1.8m. The closest path for groundwater would be via discharge to the Whitestown Stream. Given the low productivity of this GWB, the small scale project and the large distance to the Natura 2000 sites, significant impacts via groundwater pathways are not anticipated.

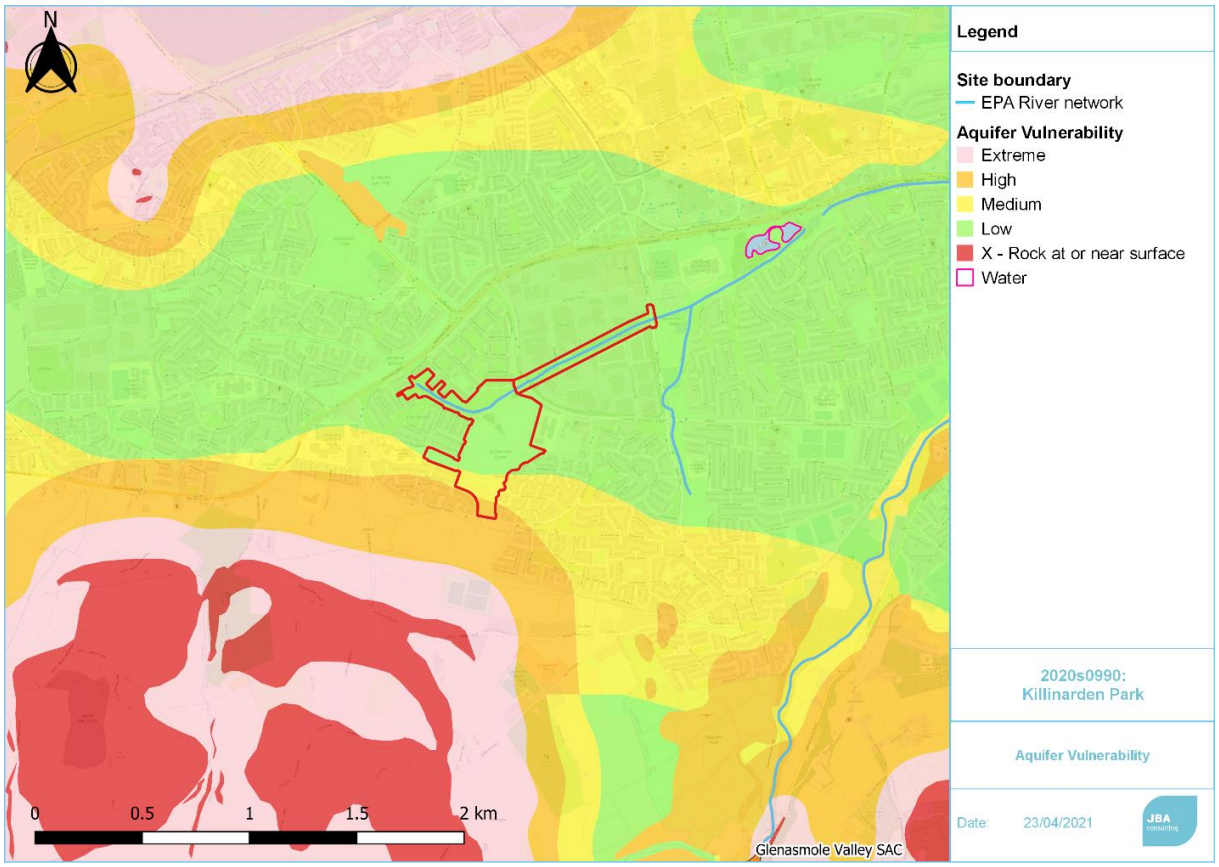


Figure 5-2: Aquifer vulnerability of proposed site

5.2.4 Land and Air

The loss or degradation of supporting habitats outside the identified Natura 2000 sites via land- and air-based impacts could have potential adverse impacts on a number of the QIs associated with these Natura 2000 sites.

Land (physical on-site and noise disturbance)

Since the proposed site is located in an urban area and is more than 2 km distance from the nearest Natura 2000 site, impacts via land pathways are not expected on any of the Natura 2000 sites. Cumulative impacts via land pathways are therefore not anticipated.

Air Pollution

Dust release and vehicle emissions can travel considerable distances and could potentially affect the Annex habitats and species, even if they are not located within close distance to the proposed project. The distance and direction of travel is dependent upon wind speed and direction. The proposed site has a west south-west prevailing wind year-round (Windfinder.com, 2020), therefore, any dust generated on-site will most likely be transported towards South Dublin Bay and River Tolka Estuary SPA and South Dublin Bay SAC/SPA, which are located east of the site. Machinery and transport emissions, and dust from excavations are likely sources of air pollution from this project. However this will be temporary in nature (construction phase only) and negligible within the context of urban environment. Given the small scale of the project, the urban location, and the distance from the Natura 2000 sites (>10km), any dust and vehicle emissions are not anticipated to have a significant impact on the QIs of the Natura 2000 sites.

5.2.5 Summary

Due to the location of the proposed site and its distance from the Natura 2000 sites, when considering impacts via surface water, groundwater (to surface water) and land pathways to the SACs or SPAs are not anticipated.

5.2.6 Description of likely direct, indirect or secondary impacts of the project (either alone or in combination with other plans or projects) on the Natura 2000 sites

Project Elements	Comment
Size and scale	The proposed project works will involve an upgrade to Killinarden Park of approx. 20ha in size and construction of combined cycle and footpath along unmade section of the Whitestown Stream. Elements include: • Construction of 630metres of Cycleway and footpath approximately 4metres wide along the Whitestown Stream. This will require 300mm of excavations for the path base. The path will be set back from the Whitestown stream leaving a riparian buffer zone of 10-20metres. • Construction and upgrade to paths and cycleways including Oval footpath approx. 1km long and 3.0m wide and two new bridges across the Whitestown stream • Installation of motion sensor Lighting columns 6m high pole, mono-directional LED luminaires which will require 1.5m excavation depth. • Installation of CCTV • Construction of entrances to park • Upgrade and installation of boundaries to park • Installation of playgrounds, play trails, Multi-use Games Area and Skate ramp • Upgrade of existing grass sports pitches where required (e.g. re-levelling). • Landscaping design with enhancements for biodiversity. Design will retain existing trees in Killinarden Park, some trees will be removed along Whitestown Stream on south bank.
Land-take	There will be no direct land take from any Natura 2000 sites.
Distance from Natura 2000 site or key features of the site	The Natura 2000 sites and their proximity to the proposed site: • Glenasmole Valley SAC - 2km • Wicklow Mountains SAC - 4km • Wicklow Mountains SPA - 7.5km • South Dublin Bay and River Tolka Estuary SPA - 12.6km • South Dublin Bay SAC - 12.6km • North Bull Island SPA - 15.6km • North Dublin Bay SAC - 15.6km
Resource requirements (water abstraction etc.)	There will be no water abstraction requirements and materials for construction will be imported from existing extraction projects or recycled on site.
Emissions (disposal to land, water or air)	Temporary Impacts: Water: There may be some release of sediment or pollutants into the Whitestown Stream during the construction of nearby paths and two proposed bridges, and additional planting such as willow along the stream. However this impact can be considered minimal due to the

	distance of more than 15km from receptors. Air: there may be some release of dusts or fumes into the air during construction and landscaping, however any potential receptors downwind are more than 10km away, therefore it is not anticipated that there will be any impacts for air pathways on any Natura 2000 sites Permanent Impacts: None anticipated
Excavation requirements	Construction phase excavation depths: • Cycleway and footpaths 300mm • Entrance features 30mm-1.0m • Lighting and CCTV columns 1.5m • Footbridge Timber piling 1.8m depth • Skateramp 600mm • Artificial pitch surface 300mm • Playgrounds 1.0m Maximum depth will be small area of piling works. It is not expected the excavation will impact bedrock.
Transportation requirements	Temporary Impacts: Levels of traffic to the site during the construction phase will increase traffic to the area but will be temporary in nature. All access to the site will be on pre-existing roads and transportation requirements will not affect Natura sites. Permanent Impacts: The upgraded park will likely increase the use of the site by pedestrians and cyclists; however, it is not anticipated to be an increase of motor vehicles. Given the location of the proposed project, transportation requirements will not affect Natura 2000 sites
Duration of construction, operation, decommissioning etc.	Construction will last approximately 12 months. Operation will be permanent, and no decommissioning is anticipated. A section of the Strategic GI Corridor route next to the Traveller Accommodation Site, will be relocated after the planned decommissioning of the site in accordance with the Traveller Accommodation Programme for the County

5.2.7 Description of likely changes to the Natura 2000 sites

Potential Impact	Comments
Reduction of habitat area	There will be no reduction in habitat area for any of the Natura 2000 sites.
Disturbance to key species	Temporary Impacts: The construction works will temporarily increase the noise level and disturbance locally. However, no significant impacts are anticipated to key species given scale and temporary nature of the construction phase and distance from the Natura 2000 sites. Permanent Impacts: No disturbance to key species is anticipated during operation of the project.

Habitat or species fragmentation	No habitat or species fragmentation is likely as the project poses no restrictions to habitats or species of the Natura 2000 sites.
Reduction in species density	None anticipated.
Changes in key indicators of conservation value (water quality etc.)	Temporary Impacts on Water Quality: Changes in key indicators, such as water quality, are not anticipated during the construction phase of the development. Permanent Impacts on Water Quality: Changes in key indicators, such as water quality, are not anticipated during the operational phase of the development.
Climate change	N/A

5.2.8 Description of likely impacts on the Natura 2000 sites as a whole

Potential Impact	Comments
Interference with the key relationships that define the structure of the site	Interference with the key relationships that define the structure of the Natura 2000 sites is not anticipated during the construction and operational phases of the development.
Interference with key relationships that define the function of the site	Interference with key relationships that define the function of the Natura 2000 sites is not anticipated during the construction and operational phases of the development.

Provide indicators of significance as a result of the identification of effects set out above in terms of:

Potential Impact	Indicators
Loss (Estimated percentage of lost area of habitat)	No Natura 2000 sites will experience a direct loss in habitat area.
Fragmentation	Fragmentation of habitat and/or species is not anticipated.
Disruption & disturbance	Disruption and/ or disturbance is not anticipated.
Change to key elements of the site (e.g. water quality etc.)	Potential temporary changes to key elements of any Natura 2000 site are not anticipated.

5.2.9 Describe from the above those elements of the project or plan, or combination of elements, where the above impacts are likely to be significant or where the scale or magnitude of impacts is unknown

Based upon best scientific judgement, no significant impacts are expected from the elements mentioned above; and that no significant gaps in knowledge of the scale or magnitude of potential impacts from the proposed site exist.

In-combination impacts: since the construction and operation of the project has no adverse impacts in isolation it cannot have an in-combination impact with other plans or projects and therefore no in-combination assessment is necessary (Tyldesley and Chapman 2013).

5.3 Concluding Statement

Following this initial screening of the proposed development at Killinarden Park, Tallaght, Dublin 24, it can be concluded that significant impacts are not anticipated on any Natura 2000 sites.

Following initial screening, and based upon best scientific judgement it is concluded that there will be **no likely significant effects** from the project on the following Natura 2000 sites either alone or in combination with any other plans or projects:

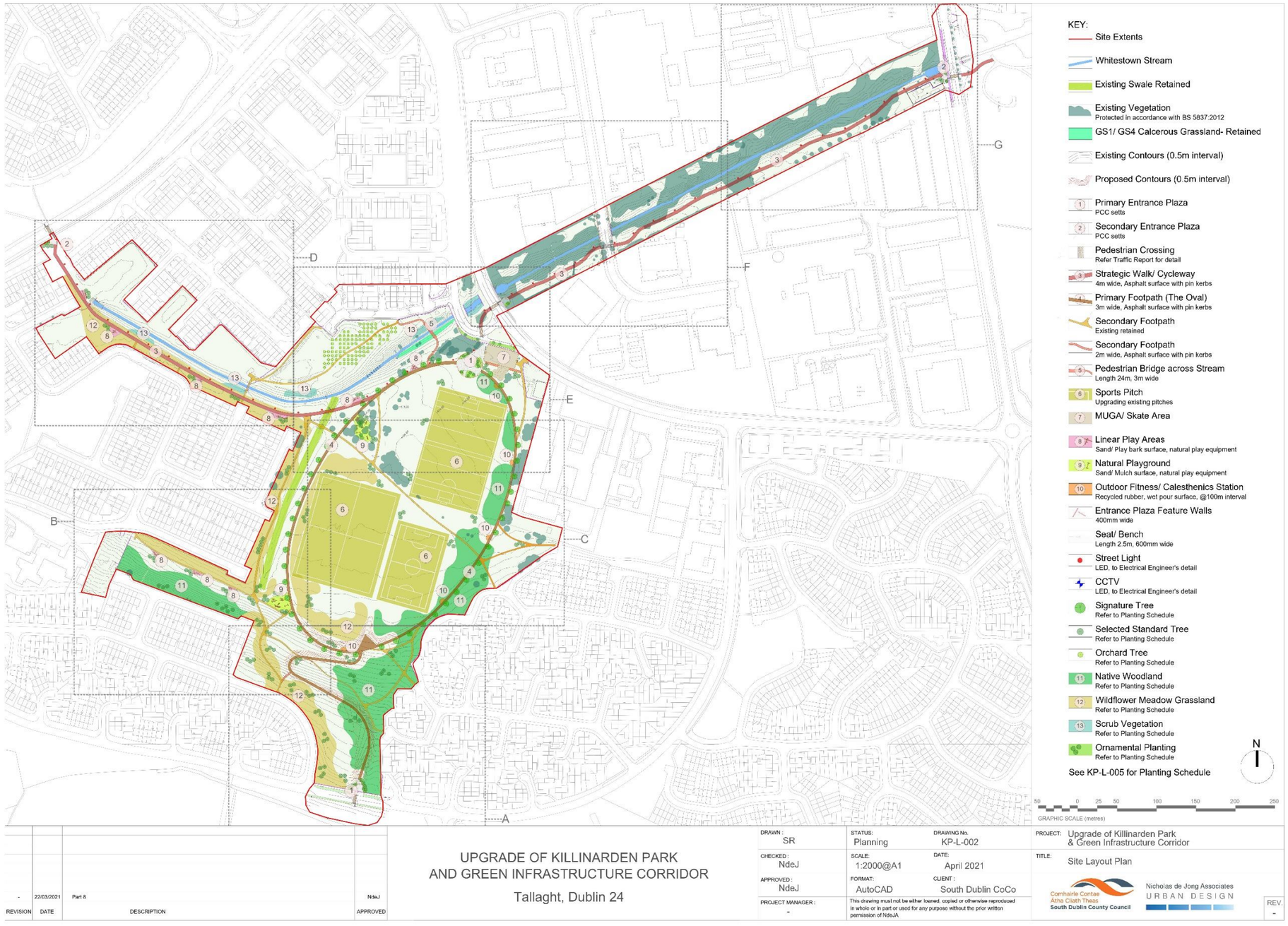
- Glenasmole Valley SAC

- Wicklow Mountains SAC
- Wicklow Mountains SPA
- South Dublin Bay and River Tolka Estuary SPA
- South Dublin Bay SAC
- North Bull Island SPA
- North Dublin Bay SAC

This assessment is based on the proposed works as described in this report. Where changes the works occur, an ecologist will need to be consulted to determine if the changes need a new Appropriate Assessment.

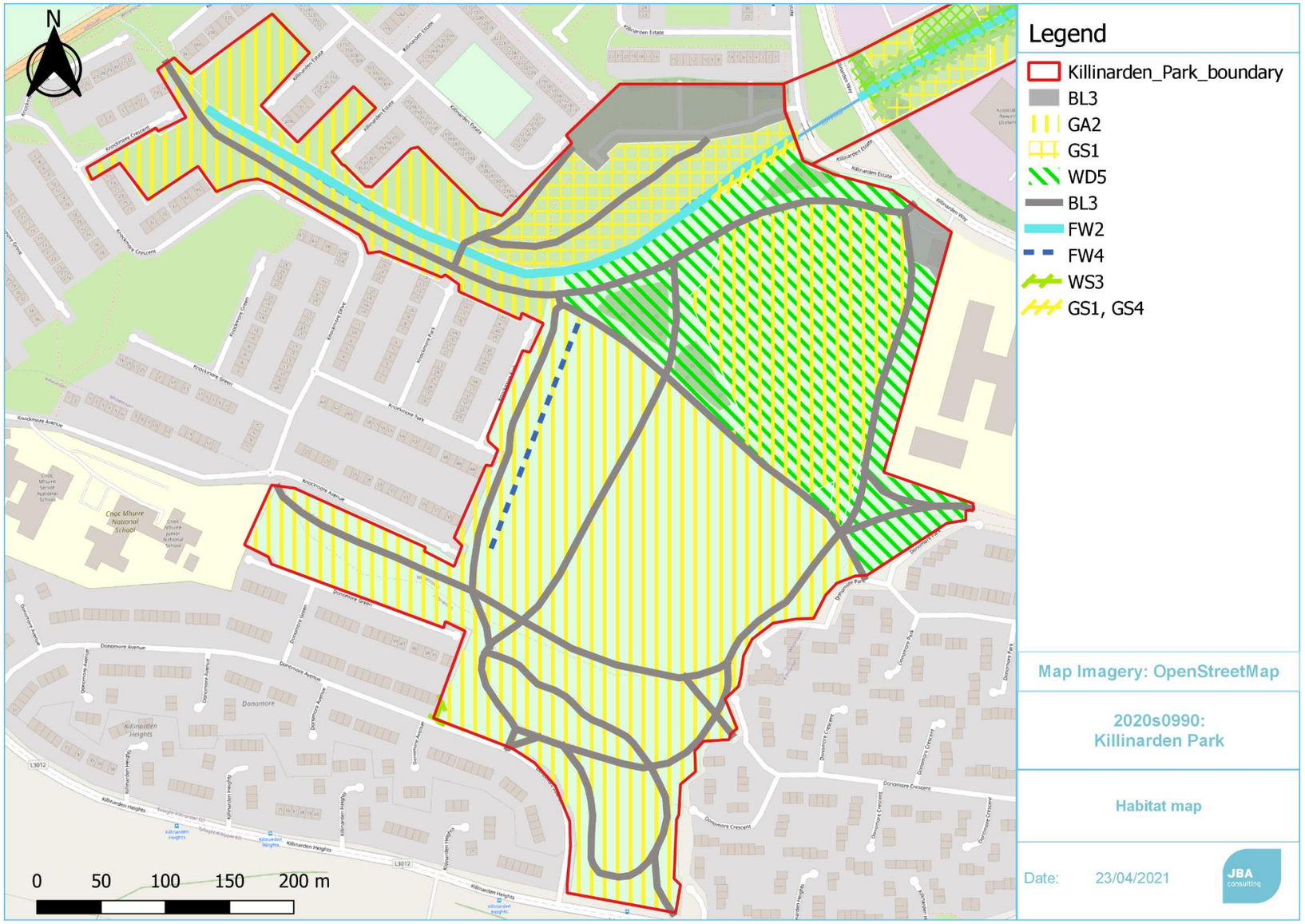
Appendices

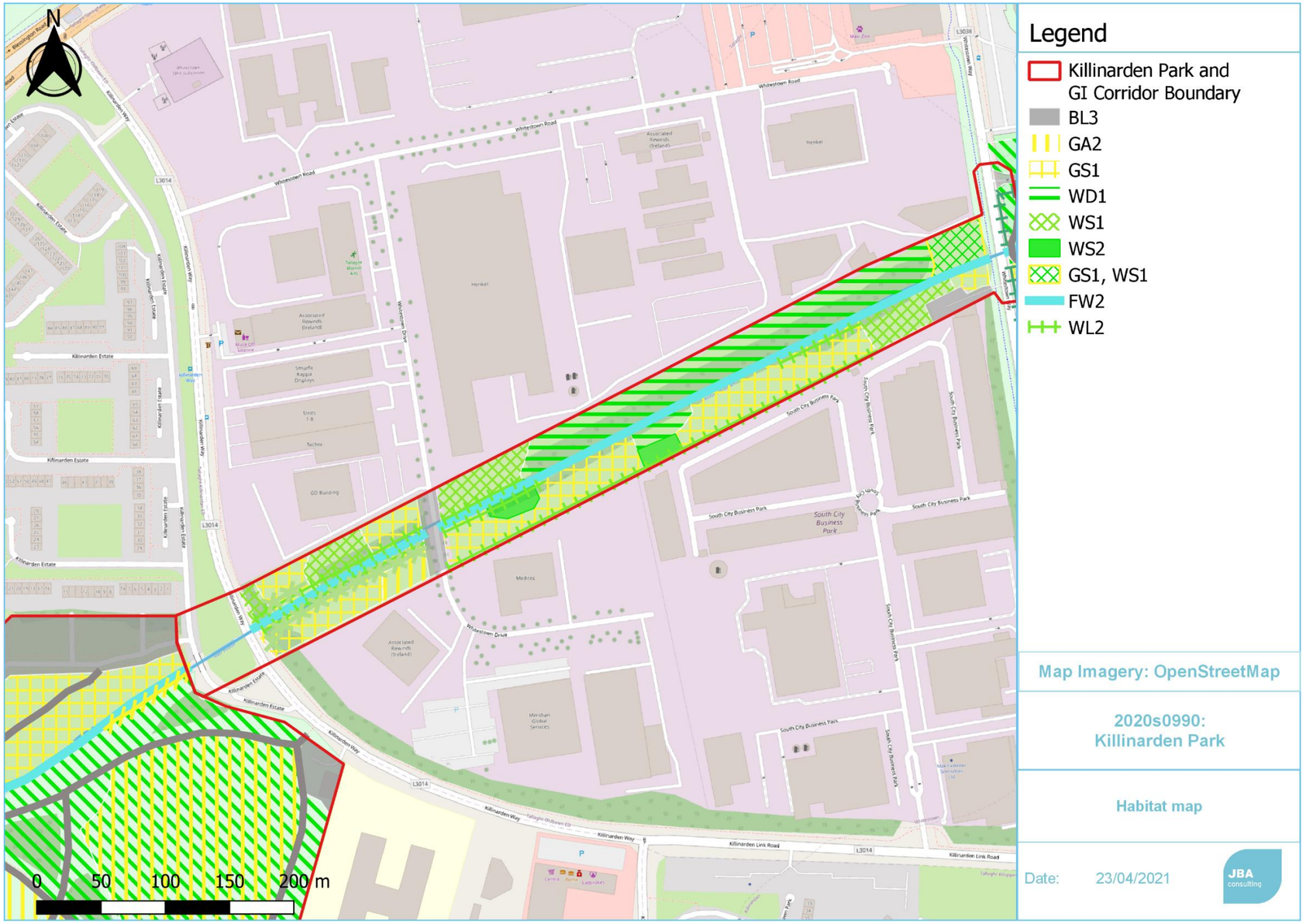
A Killinarden Landscape and Green Infrastructure Corridor Design



DXX-JBAI-XX-XX-RP-BD-0002-A3-
C01_AA_Screening_Killinarden GI and Landscape

B Habitat Maps





Legend

- Killinarden Park and GI Corridor Boundary
- BL3
- GA2
- GS1
- WD1
- WS1
- WS2
- GS1, WS1
- FW2
- WL2

Map Imagery: OpenStreetMap

2020s0990:
Killinarden Park

Habitat map

Date: 23/04/2021

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Offices at
Dublin
Limerick

Registered Office
24 Grove Island
Corbally
Limerick
Ireland

t: +353 (0) 61 345463
e:info@jbaconsulting.ie

JBA Consulting Engineers and Scientists Limited
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